

number and/or size of files that can be installed. Referring to FIG. 9, disk images 92 are created for one or more volumes containing the files to be installed. These images are then concatenated into a single file 94, which constitutes an image file tome. Each image in the tome might have an associated index resource. Since all of the files remain intact and separately defined within the respective images 92, and the images are unmodified in the image-file tome 94, the original integrity of the files is unaltered. As such, there is no need to requalify any of the files within the tome 94 to ensure their integrity for subsequent installation.

An installation package 96 comprises three elements, namely a conventional installer program 98, the image file tome 94, and a script file 100. The script file identifies the images to be mounted for the installation process, and launches the installer program once the images have been mounted. The program then operates in the normal manner to install the appropriate files from the mounted images onto a computer system. By means of this approach, prior limitations that were placed on installation processes, regarding the number and size of files that can be handled, are overcome, since each image only constitutes a single image file even though it may contain a large number of individual data files. Furthermore, since the user is only required to perform a single action, namely launch the script file, the installation takes place in a true "one-button" manner.

From the foregoing, therefore, it can be seen that the present invention provides an efficient procedure for the dissemination and replication of files in an electronic format which is not limited by the sizes of the files themselves. Through the creation of disk images and mounting of the images at remote computers, ready access is provided to the files in a speedy manner, through the use of low level network communication protocols. Through the availability of different types of formats, backing storage can be used in a manner which is most efficient, taking into account the needs of the user. Furthermore, the mounting and transfer of files is carried out independently of file systems themselves, thereby allowing files to be shared among users of different types of computer system.

It will be appreciated by those of ordinary skill in the art that the present invention can be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The presently disclosed embodiments are therefore considered in all respects to be illustrative and not restrictive. The scope of the invention is indicated by the appended claims rather than the foregoing description, and all changes that come within the meaning and range of equivalence thereof are intended to be embraced therein.

What is claimed:

1. A system for accessing computer-readable files stored on a source device, by a plurality of target computers comprising:

a disk image driver at each of said plurality of target computers having access to file format information

which enables said target computers to read files, which exhibit different file formats, contained on said disk image.

2. The system of claim 1 wherein said disk image driver includes an index which identifies correspondence between address location in said storage volume and address locations in said disk image.

3. The system of claim 2 wherein said disk image contains a compressed version of data in said files, and wherein said index further includes information pertaining to the manner in which the data was compressed.

4. The system of claim 3 wherein the data in said disk image is divided into individual chunks which are separately compressed and said index contains, for each chunk, the address of the chunk of data in the file, the address for the corresponding compressed data in the disk image, and an identification of a compression algorithm via which the data of that chunk was compressed.

5. The system of claim 4 wherein different chunks of data are compressed via different respective algorithms.

6. The system of claim 4 wherein different chunks of data have different respective sizes.

7. The system of claim 1 wherein said disk image driver includes data pertaining to different types of file systems, to thereby enable said disk image driver to access disk images stored in different disk image file formats respectively related to said different types of file systems.

8. The system of claim 1, wherein said disk image is stored on the storage device in a compressed read/only format comprising a file which contains compressed versions of chunks of data stored in said physical storage volume, and an index which provides a mapping between logical address blocks in said physical storage volume and addresses of corresponding compressed data in said file.

9. The system of claim 8, wherein said index contains information pertaining to the manner in which the chunks of data were compressed.

10. The system of claim 9, wherein the data in said volume is divided into individual chunks which are separately compressed and said index contains, for each chunk, the address of the chunk of data in said physical storage volume, the address for the corresponding compressed data in said disk image, and an identification of a compression algorithm via which the data of that chunk was compressed.

11. The system of claim 10, wherein different chunks of data are compressed via different respective algorithms.

12. The system of claim 10, wherein different chunks of data have different respective sizes.

13. The system of claim 10, wherein said uncompressed read/only format also has an associated index which provides a mapping between logical address blocks in said physical storage volume and addresses of corresponding data in the file.

14. The system of claim 1, wherein said disk image is stored on the storage device in a read/write format comprising a file which contains a copy of every logical address

block in said physical storage volume, regardless of whether the blocks contain data.

15. The system of claim 1, wherein said disk image is stored on the storage device in an uncompressed read/only format comprising a file which contains volume information and a copy of only those logical address blocks of the physical storage volume which contain data.

16. A method for providing a remote computer access to files stored on a source device, comprising the steps of:

creating a disk image of said source device, wherein said source device is a physical storage volume which contains said files to be accessed by said remote computer, and wherein said disk image is a virtual representation of said physical storage volume in that said disk image includes volume format information that reflects the format of said physical storage volume; generating a script file which includes an identification of said disk image;

launching said script file at said remote computer; and mounting, at said remote computer, the disk image identified in said script file using a disk image driver that has access to volume format information which is needed to mount files, exhibiting different file formats, on the disk image.

17. The method of claim 16 wherein said script file also includes an identification of an executable program, and further including the step of running said program at the remote computer after mounting said disk image.

18. The method of claim 17 wherein said program is an installer program which installs files from the mounted disk image onto the remote computer.

19. The method of claim 16 wherein a plurality of disk images are created and identified in said script file, and wherein all of the disk images identified in said script file are mounted at said remote computer.

20. The method of claim 16 further comprising the step of: selectively storing said disk image in a storage medium device in any one of the following disk image file formats:

a read/write format comprising a file which contains a copy of every logical address block in said physical storage volume, regardless of whether the blocks contain data;

an uncompressed read/only format comprising a file which contains volume information and a copy of only those logical address blocks of said physical storage volume which contain data; and

a compressed read/only format comprising a file which contains compressed versions of chunks of data stored in said physical storage volume, and an index which provides a mapping between logical address blocks in said physical storage volume and addresses of corresponding compressed data in said file.

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